

## Claims

We claim:

- 5      1. An animal controllant, comprising:  
              shellfish waste material, and  
              a binder material,  
              wherein said shellfish waste material comprises a weight percentage of the  
              controllant in a range of 40 to 100 percent.
- 10     2. The controllant of claim 1 wherein said shellfish waste material is chosen from  
              the group consisting of crab, lobster, mussel, shrimp, clam, oyster, and mixtures thereof.
3.      The controllant of claim 1 wherein said binder material is chosen from the group  
              consisting of clay, ground corn, corn oil and alfalfa.
4.      The method of claim 1 wherein said animal controllant is a repellent to animals  
15     chosen from the group consisting of deer, elk, hares, rabbits, gophers, voles, mountain  
              beavers, and moles, and is an attractant to animals chosen from the group consisting of  
              insectivores and carnivores.
5.      The controllant of claim 1 wherein said shellfish waste material includes a mineral  
              composition of calcium carbonate in a range of 80 to 95 weight percent, calcium  
20     phosphate in a range of 5 to 15 weight percent, and chitin in a range of zero to 5 weight  
              percent.
6.      The controllant of claim 1 further comprising a colorant.
7.      The controllant of claim 1 wherein said controllant is adhered to a substrate  
              manufactured from a material chosen from the group consisting of mylar, plastic, and  
25     vinyl.
8.      The controllant of claim 1 wherein said shellfish waste material comprises mussel  
              material, said binding agent comprises ground corn, and wherein said mussel material  
              comprises soft mussel tissue in range of 20 to 40 weight percent of the shellfish waste  
              material and hard mussel shell in a range of 40 to 80 weight percent of the shellfish waste

material, said repellent further comprises corn oil in a range of 5 to 10 weight percent of the controllant, and colorant in a range of 0.001 to 10 weight percent of the controllant.

9. The controllant of claim 1 wherein said shellfish waste material comprises ground crustacean shell material.

5 10. The controllant 1 wherein said controllant is nontoxic to plants and is biodegradable.

11. The controllant of claim 1 wherein said controllant is used as an attractant for carnivorous animals.

12. A method of repelling animals from a plant, comprising the steps of:

10 providing a repellent, said repellent including at least 40 weight percent shellfish waste material,

placing said repellent on a plant.

13. The method of claim 12 wherein said step of placing said repellent on said plant comprises placing said repellent on a region of a plant chosen from the group consisting 15 of a plant leaf, a plant needle, a plant branch, a plant root zone, and a plant bark.

14. The method of claim 12 wherein said step of placing said repellent on said plant comprises placing said repellent on a substrate and then placing said substrate on said plant.

15. The method of claim 14 wherein said substrate comprises a material chosen from 20 the group consisting of mylar, plastic, and vinyl.

16. The method of claim 14 wherein said substrate comprises a tube placed on a root zone of said plant and extending upwardly therefrom and around a remainder of said plant.

17. The method of claim 12 wherein said repellent further includes a binding agent 25 chosen from the group consisting of clay, ground corn, corn oil and alfalfa.

18. The method of claim 12 wherein said shellfish waste material is chosen from the group consisting of crab, lobster, mussel, shrimp, clam, oyster, and mixtures thereof.

19. The method of claim 12 wherein said step of placing said repellent on said plant comprises placing an adhesive on a portion of said plant, and then placing said repellent 30 on said adhesive.

20. The method of claim 19 wherein said adhesive is non-phytotoxic and is chosen from the group consisting of water and glue.
21. A method of preparing an animal controllant, comprising the steps of:  
providing a shellfish waste material including water mixed therewith;  
5 grinding said shellfish waste material;  
adding a binding agent to said shellfish waste material to form a shellfish waste mixture; and  
drying said shellfish waste mixture to reduce a water content thereof and so as to form said animal controllant.
- 10 22. The method of claim 21 wherein said animal controllant repels deer, elk, hares, rabbits, gophers, voles, mountain beavers, and moles.
23. The method of claim 21 wherein said animal controllant comprises at least 40 weight percent shellfish waste material, at least 40 weight percent binding agent, and a colorant.
- 15 24. The method of claim 21 wherein said shellfish waste material is chosen from the group consisting of crab, lobster, mussel, shrimp, clam, oyster, and mixtures thereof.
25. The method of claim 21 wherein said step of drying said shellfish waste mixture comprises drying said shellfish waste mixture to reduce a water content thereof to a water content of less than 5 weight percent.
- 20 26. The method of claim 21 wherein said step of drying said shellfish waste mixture comprises drying said mixture at a temperature in a range of 80 to 100 degrees Fahrenheit for at least forty five minutes.
27. The method of claim 21 wherein said animal controllant is an attractant to insectivores and carnivores.
- 25 28. The method of claim 21 wherein said controllant produces ammonia in response to exposure to sunlight.
29. The method of claim 21 wherein said controllant produces ammonia as said controllant decomposes.